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SIEGEL

# **DISPERSED RECREATION MANAGEMENT STUDY**

## **SOUTH SIDE**

## **MOUNT ST. HELENS**

## **NATIONAL VOLCANIC MONUMENT**

**DAN SIEGEL**

Gifford Pinchot National Forest  
Mount St. Helens National Volcanic Monument  
42218 NE Yale Bridge Road  
Amboy, WA. 98601-4601

**Clemson University**  
**Class of 1995**

**MAY 1996**

This paper was prepared as a student project in partial fulfillment of the requirements of the Professional Development for Outdoor Recreation Management Program at Clemson University. It in no way reflects USDA Forest Service policy nor are the opinions expressed those of anyone other than the author.

**AUTHOR:** Dan Siegel  
Public Service Assistant  
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**TITLE:     DISPERSED RECREATION MANAGEMENT STUDY  
           SOUTH SIDE - MOUNT ST. HELENS NATIONAL VOLCANIC MONUMENT**

**ABSTRACT:**

This project examines the needs of dispersed recreationists on the south side of Mount St. Helens and will develop a strategy for implementation of a dispersed management plan for the area. The paper looks at user needs and trends, demographics, resource impacts and management direction identified in the Gifford Pinchot National Forest Land and Resource Management Plan and the Mount St. Helens National Volcanic Comprehensive Management Plan. Recommendations for development of an effective management strategy based on identified visitor needs, resource impacts, and budget and managerial constraints is outlined for development of a dispersed recreational plan for the area.

**Keywords:** Dispersed Recreation, Recreation Management Planning, Mount St. Helens National Volcanic Monument



## **EXECUTIVE SUMMARY**

**TITLE:** Dispersed Recreation Management Study, South Side - Mount St. Helens  
National Volcanic Monument

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This paper is the first step in developing a dispersed recreation management strategy for the south side of Mount St. Helens National Volcanic Monument.

Located within two hours of two million people, management of this area to provide a quality recreational experience presents great challenges and opportunities in meeting customer expectations. Understanding the demographics of our customers, today and ten years from now will help us provide the services our visitors want and need. Technological changes in recreational equipment will impact us in ways we have not envisioned. Utilizing planning tools like the Recreation Opportunity Spectrum (ROS) to define acceptable activities and Limits of Acceptable Change (LAC) to develop management strategies through interdisciplinary processes that solicit active public participation, will provide defensible dispersed recreational planning supported by our recreational visitors.

Investigation and charting of physical conditions to determine trends in use patterns will be completed during the summer of 1996. Public and informal meetings with dispersed users will be conducted to determine what services our customers would like to see developed in 1996. Development of an environmental education and interpretive program will be emphasized on Forest and through media programs. The purpose is to heighten visitor awareness and encourage an increased understanding and acceptance of dispersed recreational program needs as we move into the 21st century.



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## **INTRODUCTION**

The Forest Service began providing recreational opportunities to visitors of our national forests in the early part of this century. Recreation use had grown to over three million visitors by 1917 (Roth, 1984). Today, over one hundred million recreationists use our national forests annually. Visitation at Mount St. Helens National Volcanic Monument exceeded four million recreational visitors in 1995.

Demand for recreational opportunities are soaring as more people pursue recreational activities on our national forests. The Gifford Pinchot National Forest has been designated an Urban Forest with over two million people (Eisemann, 1995) living within two hours of the Forest in the Portland/Vancouver metro area.

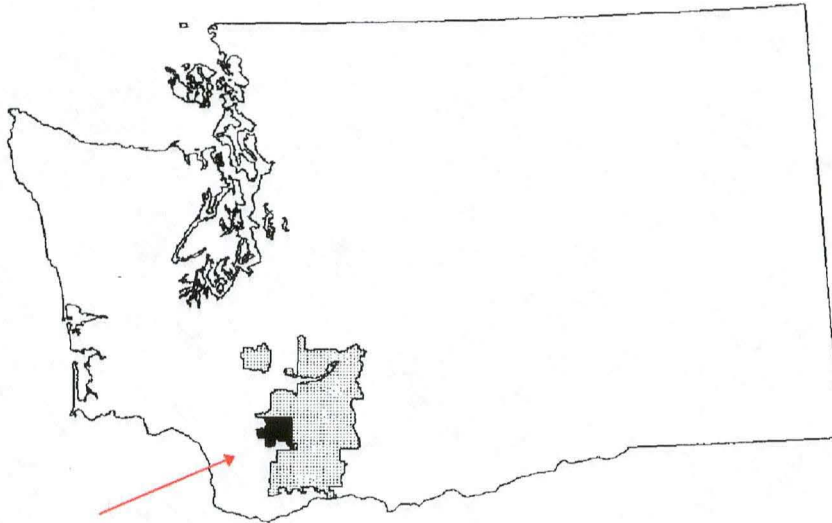
Many visitors to the Monument pass through daily utilizing the developed recreational facilities constructed offering showcase views and interpretation of the events that reshaped the monument on May 18, 1980 when Mount St. Helens erupted. Other visitors come seeking the dispersed recreational opportunities offered in less developed areas of the forest. These experiences range from physically challenging the elements of nature to seeking peace and solitude in the forest, far from the city, work, neighbors and the stress of every day life.

The focus of this study is to analyze the trends in dispersed recreation on the south side of Mount St. Helens area of the Gifford Pinchot National Forest and develop a basis for present and future dispersed recreational management decisions.

## **STUDY AREA**

The area of this study is located in Mount St. Helens National Volcanic Monument on the Gifford Pinchot National Forest. Located in southwest Washington, approximately one hour north of Vancouver, the study area encompasses the slopes south of the crater of Mount St. Helens, west to the Kalama area and east to the Muddy River. Principle access is from Interstate 5 to State Route 503. Mount St. Helens National Volcanic Monument (hereafter referred to as the Monument) is comprised of 110,330 acres decreed by Congress in August 1982 when Congress acknowledged legislatively the uniqueness and beauty of Mount St. Helens. The Monument administered lands are also comprised of 348,609 acres of forest lands that originally comprised a substantial portion of the Columbia National Forest.

## **WASHINGTON**



## **STUDY AREA**



## **LITERATURE REVIEW**

Literature on the management of dispersed recreation is growing exponentially as county, state and federal agencies identify the need to manage this segment of outdoor recreation. A review of scientific and technical investigations dealing with dispersed recreation was initially conducted from research at Info South and presentations from the Short Course (1995). Further research data was found visiting U.S. Department of Agriculture, Forest Service, Forest and Range Experiment Stations home pages located on the Internet. They provide a quick synopsis of research and allow request of literature on line at no cost. A computer query of the Fort Vancouver Regional Library provided research from State of Washington Agencies and Clark County.

The State of Washington Interagency Committee for Outdoor Recreation, has conducted extensive research into user demands and needs for recreation within the State of Washington. They have forecasted trends in recreational demand and provide extensive background on user demographics in their publication; Washington Outdoors: Assessment and Policy Plan 1990-1995. A recent follow-up publication, Assessment and Policy Plan 1995 - 2001, identifies key agencies in providing dispersed recreation and the pressures from rapid population growth and development.

Research by Washington State University, Gifford Pinchot National Forest Social Assessment Study: Rural, Urban and Visitor Perspectives of the Siouxi Valley Drainage (Steel, List, Schindler, 1993), provides summaries of opinion surveys and information about social values and use patterns. The area of study is adjacent to the Kalama block.

The Gifford Pinchot National Forest Land and Resource Management Plan (1990), provides information about recreation demand and management direction.

The Mount St. Helens National Volcanic Monument Final Environmental Impact Statement Comprehensive Management Plan (1984), provides extensive background on recreational development on the Monument and provides definition of Recreation Opportunity Spectrum (ROS) settings on the Monument. This document has provided the blueprint for development of the Monument, but does not adequately address the population growth that has occurred in southwest Washington this decade.

The publications listed in the bibliography aided in exploring dispersed recreation and inter-related interest areas. They provide a means for collating and analyzing the social and environmental conditions, and developing a planning process leading to future adoption of a dispersed management plan for the south side of Mount St. Helens.

## Use Information

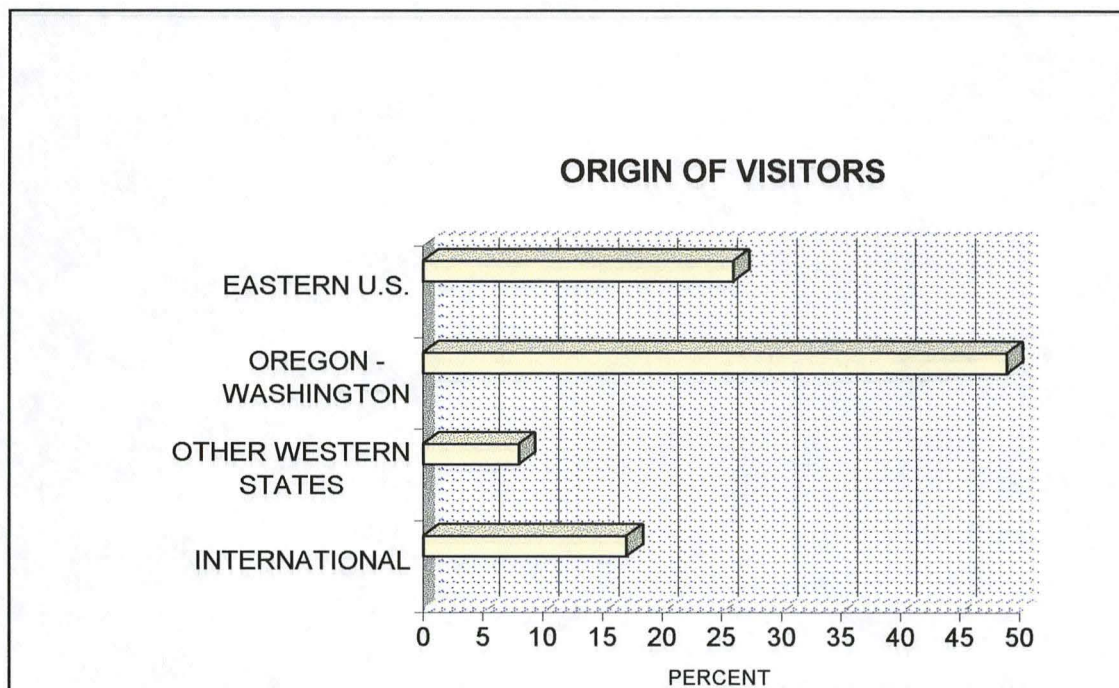
The area south of Mount St. Helens has attracted visitors since the late 1880's when settlers to the valley bottoms discovered the natural beauty and resources of the area. Elks were introduced into the area in 1927 and still prosper today. The first jeep road into McBride lake was threaded through the forest in the early 1940's and provided the primary access to the area until 1958 when the Forest Service constructed a road for timber harvest and management of the areas resources.

## Season of Use

Spring arrives to the area in March and follows the melting winter snows up the slopes of Mount St. Helens until June, when the heat of summer warms the high country. From April through October, the area receives extensive dispersed recreational use from hikers, bikers, horse users, sightseers, climbers, campers, hunters and fishermen. November brings the return of the winter snows and dispersed recreational activities turn to snowmobiling and cross-country skiing.

## Origin of Visitors

The Monument attracts visitors from all over the world. Use data shows 17% of users originate from foreign countries, 49% from Washington and Oregon, 34% from the remaining United States.





## Demographic Characteristics

Demographic information helps provide a profile of the typical recreationist to Mount St. Helens NVM. A study by Porter (1993) found the predominant characteristics wanted or displayed by users to be:

- \* White male from 25 -- 41 years of age (57%);
- \* Employed full time (43%);
- \* High school graduate with some college or a bachelor's degree (68%);
- \* Family income of over \$25,000 per year (78%)
- \* Previously visited the Forest many times;
- \* Visits the Forest several times a year;
- \* When camping, stays one to two nights.
- \* Travels less than two hours from home;
- \* Participates in several activities.

Socio-demographic trends evidenced today can give us insight into future visitor trends. Derrick Crandall, from the American Recreation Coalition (Clemson, 1995), describes the Baby Boomers as the most influential group shaping recreation today. This middle aged component of our society is characterized by their desire to invest in technological accessories and recreational vehicles. They have the vacation time to enjoy leisure activities and will soon be adding to the seniors population and retiring with increased recreation time. Quality of recreational experience is very important to the Boomers and they are looking for more front country recreation. They are more physically fit than previous generations their age. They pursue knowledge through interpretation and multi media and written materials.

Generation X'ers, the young people from 18 - 29 years old, will be the next group to significantly influence recreational policy on our National Forests. They embrace hi-tech products like mountain bikes, climbing drills, and night vision devices. They are more visually stimulated than readers. More X'ers are going to college and getting married later. Fewer X'ers (12 - 20%) are visiting the National Forests.

Demographic trends show minorities to represent 25% of the population (33% of children) but only 6% of forest visitors (USDA, 1992). By the year 2005, Hispanics could replace African-Americans as the nations second largest population group and largest minority group. This group enjoys participation in traditional outdoor recreational activities but also fully embraces non traditional activities like ecotourism, mountain biking, hang gliding and bungee jumping (Chavez, 1994).



## **EVALUATION & PLANNING PROCESS**

### **Limits of Acceptable Change Planning Process (LAC)**

This planning process was developed for measuring recreational use in wilderness areas through the identification of unacceptable impacts on the social and resource consequences of recreational use of wilderness. Although developed for wilderness, the LAC process can be used to address other natural resource management situations where, through the selection of indicators and standards, the thresholds of unacceptable impacts can be identified, and management actions can be implemented to address unacceptable impacts.

The LAC process represents a reformation of the recreation carrying capacity concept with emphasis on desired social and resource conditions rather than how much use an area can endure. The LAC concept is based on the premise that recreational use of an area can affect the quality of both the natural environment and recreation experience. In applying the LAC concept, managers assume that change to the ecological and social conditions of the area they are managing is going to occur, due to both natural and human factors. The goal of management is to keep the character and rate of change due to human factors within acceptable levels (Hendee, Stankey, Lucas, 1978).

The procedure for implementing the LAC concept involves identifying issues and concerns, developing management objectives, and describing the recreation opportunities that will be provided. When the indicators and standards are developed from resource user and management consensus, there is greater support for management activities.

Ecological and social factors that are likely to change are identified and used to gauge the amount of change occurring. For each indicator, managers must set a standard with a threshold value which defines the amount of change that is acceptable and unacceptable. The purpose of selecting indicators and standards is to provide managers with a reference point to judge if the recreational opportunity they are managing is being provided over time. The standards serve as a trigger device rather than as management policy. If conditions deteriorate and a standard is approached, mitigation measures can be implemented to avoid unacceptable change.

## **Management of Recreation**

Virtually all the 100,337 acres of the study area are managed for recreational use. The amount and type of recreation that may occur on any given area is dependent on land capabilities and management emphasis for that specific area. Objectives for recreation management of the Kalama study area (CMP) are to:

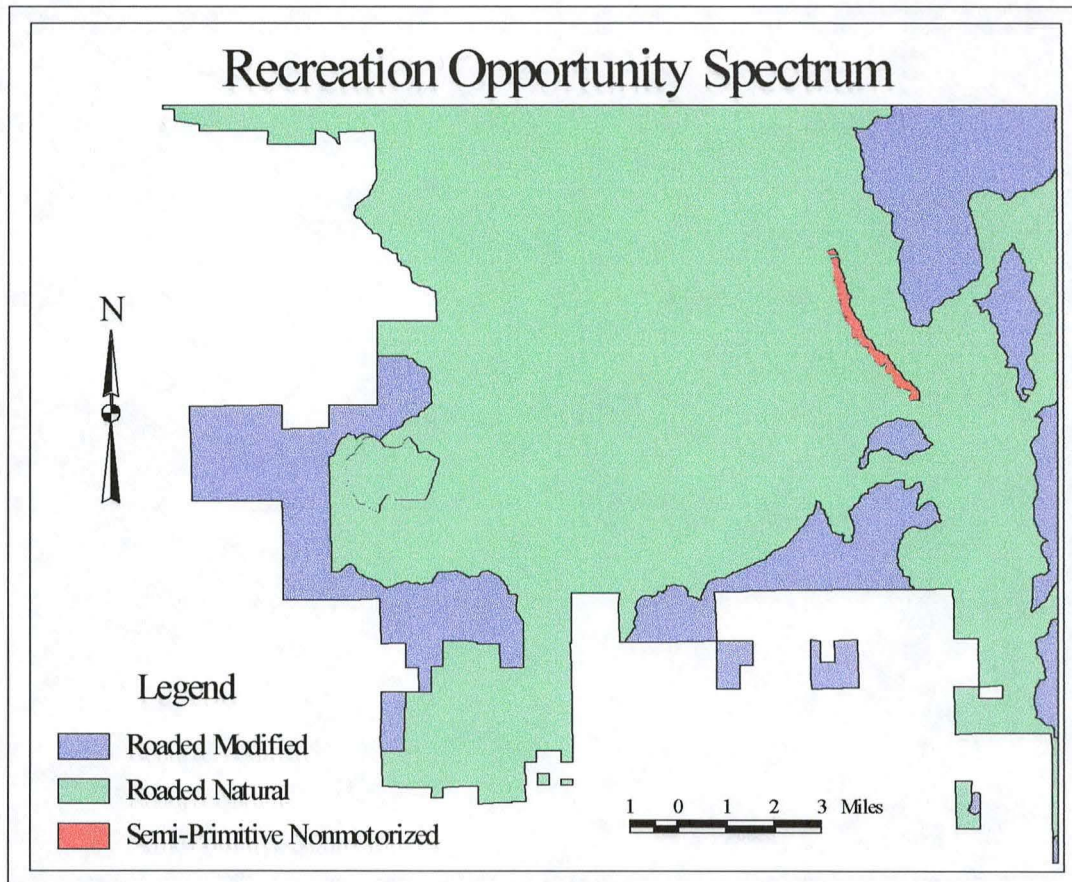
- \* Encourage and facilitate public enjoyment and understanding of the Monument,
- \* Provide a variety of recreational opportunities that can enhance quality of life for visitors and area residents, and
- \* Assist in building a diversified, strong and stable economy for neighboring communities.

Management direction to meet these objectives will focus on management of Monument visitors and management of recreational settings and opportunities. Management of visitors will involve both numbers and behavior of visitors and will help protect the physical and biological resources that provide the foundation for recreational use and help maintain a variety of high-quality recreational settings and experiences.

Recreational settings are a primary tool for regulating visitor numbers and will be managed to maintain acceptable levels of use and thereby prevent deterioration in quality of recreation experiences over time. The social component of settings (average visitor density, frequency and duration of encounters) provide guidance regarding maximum use levels for an area.



Recreational settings for the study area are:



### Human Dimension

Ecosystems have three interrelated dimensions: the physical (landforms, minerals, geology), the biological (plants, animals) and the human dimension. The human dimension component of ecosystem management must include information about people's traditional and changing perceptions, beliefs, attitudes, behaviors, needs, values, and the past, present and possible future influences of humans on ecosystems. The human dimension objective in ecosystem management can be defined as "seeking to understand human demands on, values and perceptions of, and interactions with ecosystems and to integrate those into policy, programs and management".

There are six classes of human dimension information relevant to sustainable ecosystem management, monitoring and evaluation (National Human Dimensions of Ecosystem Management Task Team, 1994):

History: Written and archaeological history and prehistory of ecosystems, management units, areas, and sites, including evidence of prehistoric human existence and activity.



Resource Character: Human perception of the condition, utility, appearance, or function of ecosystems and land units, (e.g. What looks good to people?).

Social Situation: Existing social conditions including human benefits, values, traditions, myths, religious beliefs, cultures, special interests, economic and social dependencies, demographics, and transportation or other human modifications to natural systems that area an integral part of human society.

Managerial Situation: Management systems, mandates, authorizations, technologies, philosophies, values, constraints, plans, goals, decision-making, or other aspects of management process that are related to ecosystem management.

Demands and Needs: Generally demands and needs include commodity, non-commodity, and appreciative demands and needs. While some of these demands are expressed through economic markets, many others are expressed in more indirect ways, such as political structures, on-site use patterns, organizational memberships, environmental education, viewing scenery, and many other avenues. Demands are derived from the values, traditions, and dependencies that people attach to natural resources and the ecosystems they compose.

Effects: Effects include the results (both positive and negative) of direct and indirect social, economic, and resource interactions (including cumulative effects). As the term interaction infers, effect are both from humans upon the ecosystem and from the ecosystem upon humans.

Inventorying the relevant biophysical and human dimension attributes is important to identifying the characteristics of the area. From this, we can describe the existing conditions and values of importance to managing the area and begin to identify trends that will influence our management strategies.

### **Recreation Participation by Activity Category**

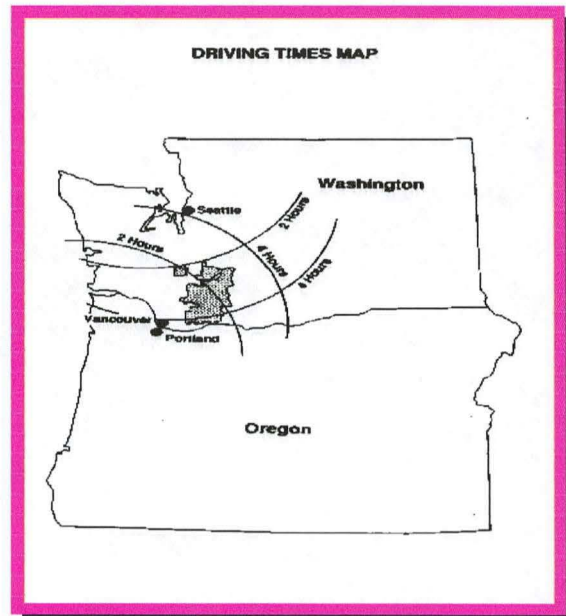


### **Recreation Participation**

A study by the Washington State Interagency Committee for Outdoor Recreation found that the area within a four hour drive of Mount St. Helens is the origin for the majority of the state's recreation demand for all recreation activity categories. With the exception of camping activities, this region is used as the destination for more recreation demand than any other region within the state (Washington IAC, 1990). The most popular activity for recreation is sightseeing and picnicking (89%).



A study by the Northeastern Forest Experiment Station (Daigle, Watson, Haas, 1993) found people willing to spend 2.8 - 3.6 hours traveling to recreational areas and travel 98 - 142 miles to participate in hiking, recreational driving, fishing or camping activities. Extension of projected driving times shows that the Pudget Sound basin is within the limits of acceptable commuting distance. This projection shows almost five million people within four hours of the study area. Dispersed users and organized groups from the Pudget Sound region and Yakima Valley, routinely recreate on the south side of the mountain.

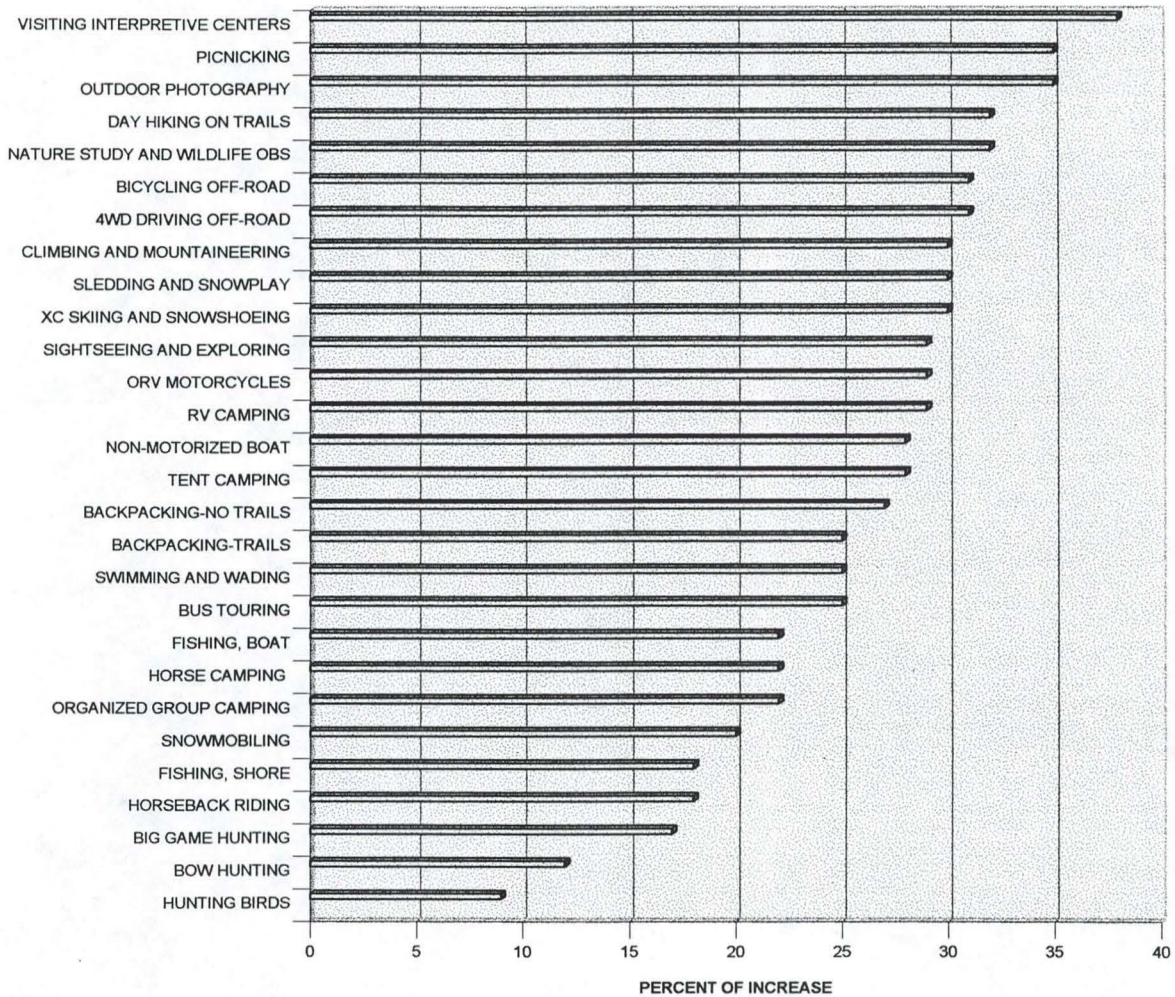


### **Demand Projections**

The anticipated growth in recreational activity for this decade is predicted to grow faster than the population. This is based on future population, age structure, income and supply of opportunities. This increased demand will place strains on our dispersed recreation facilities. Some existing and potential recreation settings are being lost to non recreational uses on adjacent lands increasing demand on Forest lands. The following graph from an Interagency Committee for Outdoor Recreation study (1990) shows the anticipated activity growth for southwest Washington this decade.



# ANTICIPATED ACTIVITY GROWTH 1990 - 2000





## **State and Private Land Ownership**

Adjacent landowners include large land tracts owned and administered by Washington State Department of Natural Resources (DNR), Pacificorp, Plum Creek Timber Company, and Weyerhaeuser Corporation. The DNR uplands (trust lands), are managed for commodity production with recreation relegated to a secondary role (IAC Assessment and Policy Plan 1995 - 2001, 1995). Recreation is not yet considered a commodity to the agency. DNR trails and facilities are almost non-existent in the area. The only developed campground in the area at Merrill Lake was decimated by a landslide during the flooding of February 1996.

Pacificorp manages three dams on the North Fork Lewis River and manage surrounding holdings providing developed camping and water access. They have no developed system of trails and discourage dispersed activities through access management by limiting road access and gating.

Plum Creek Timber and Weyerhaeuser Corporation have traditionally allowed dispersed access to thousands of acres for years providing hunting, fishing, camping and hiking opportunities. Unfortunately, as the urban population has grown the last decade, so has the infusion of trash, hazardous materials and vandalism. Faced with economic outlays for cleanup and repair of equipment and facilities, these companies have been forced to close large tracts to public access.

Faced with closed access to thousands of acres of land traditionally open to dispersed access, many of these users are now concentrating their activities on Forest Service lands, causing rapid growth in user activities.

## **Physical-Biological Conditions**

### **Resource Impacts and Concerns**

Dispersed Roaded Recreation: A network of roads is developing out through the timber in many places as recreationists "blaze" a path farther and farther back from the developed roads. Much of this area is characterized by gentle sloping land vegetated with small lodgepole pine, hemlock and Douglas fir trees. These roads commonly extend from several hundred feet to a half mile from the developed road system. They are single lane tracks that meander through the woods following the path of least resistance. During hunting season, these areas become small cities. Some of these roads lead to water but most wander through the trees until they encounter a physical barrier that impedes further construction. An escalation of this development has occurred over the last five years with greater demand for dispersed recreational sites. Stopping this random development of roads and rehabilitating damaged areas will require communicating with dispersed users at the site, signage and placement of physical barriers to allow rehabilitation to occur.



## **Watershed Resources**

The principle perennial streams in the area include the Kalama River, Lava Canyon, the Muddy River and Pine Creek. The Kalama River was essentially untouched during the eruption of Mount St. Helens and retains its riparian ecosystem intact. The Muddy River, Lava Canyon and Pine Creek were all subjected to volcanic mudflows during the eruption. These channels received extensive sediment deposits and flows of woody debris and still yield high sediment flows during period of high water flow.

Lakes in the area include Merrill (DNR), Goat Marsh, McBride, Blue, and June. Merrill and McBride are accessible by road and receive moderate fishing pressure. Blue and June lakes are both within a one mile hike from established trailheads.

Wetlands include Goat Marsh Research Natural Area (206 acres) and Marble Mountain (357 acres). Both are managed to minimize dispersed recreational use.

## **Fish & Wildlife**

Impacts to wildlife as a result of dispersed recreational activities vary by season of use. Roads, trails and developed sites impacts are low except for some wildlife sensitive to human activity during reproductive seasons. The Northern Spotted Owl inhabits portions of the Kalama area but are generally away from primary corridors of concentrated dispersed use. Goat Marsh Research Natural Area provides habitat for elk calving and is managed to discourage dispersed use. Winter range for deer and elk is generally outside the study area and is not impacted by snow mobile and cross country skiers.

## **Cave Management**

Caves are a resource of significant geologic and biological importance on the Monument. Most were formed in the Cave Basalt lava flow approximately 1,900 years ago leaving lava tubes. To date, 68 caves have been discovered in this study area. Many of the caves are nondescript, but several are of international significance. They range in size from small indentures to Ape Cave, almost two miles long. Many of the caves provide habitat for sensitive animals, flora and fauna including the Townsend's big-eared bat and Larch Mountain Salamanders. A cave management plan was completed in 1994 (Nieland, Clemson project) providing direction for protection of caves with sensitive features.

## **Wildfire**

The presence of fire in the area has been minimal over time. Fifty years of available data report only 70 fires in the Monument area over the last 50 years, an average of 1.4 per year with six in one year the highest number recorded. The increased presence of dispersed use will potentially increase the potential frequency of fire in the Kalama area along travel corridors. Fire season and fire danger periods appear to more affected by short term drying periods of three to five days than by long term weather trends.



## **Silvicultural Activities**

Long term sustained production of timber resources outside the Legislated Monument is a management objective identified in the Forest Plan for areas with timber land classification. A portion of the area contains old growth stands that are maintained to meet legislative and regulatory direction for ecological diversity.

## **Transportation and Trail System**

A network of 112 miles of road provide access to this area. Development of the roads infrastructure is complete within the affected study area. Minor reconstruction of roads 81, 8123 and 8100-830 is listed on the capital investment program to complete minor reconstruction and pave these roads to protect resources and accommodate low clearance vehicles. Vehicle counts on road 83 to Lava Canyon, often exceed 400 vehicles per day during the summer months.

Trails provide linkage to many of the physical features around the "Mountain" that are not assessable by road. Trails outside Research Natural Areas and the area affected by the blast, allow horse and llama use. All trails in the study area are open to mountain bike and hiker use. All trails are closed to motorcycle and ORV use.

Two trails remain to be completed as identified in the Monument Comprehensive Management plan, Sheep Canyon (8 miles) and Cinnamon (5 miles). A watershed analysis is scheduled for 1997 in this study area. The existing trail system adequately provides designated access routes.

## **Social, Economic & Managerial Conditions**

### **O&M and Sanitation**

Operations and maintenance activities center on trail maintenance, litter cleanup and access management. Most of the trail maintenance is done in partnership with local chapters of the Back Country Horsemen of Washington, climbing clubs and mountain bike clubs from Vancouver and Portland.

Litter cleanup is on going and peaks at the end of elk season when many of the plywood and plastic shelters left behind need dismantled and the garbage from campfires cleaned. Many hunter camps are established during the October deer hunt and remain until the end of elk season. Enforcement of the 21 day stay limit has helped deter some litter problems and contacting individual camps to explain management concerns about cleanup. Providing litter bags help promote a positive cleanup effort.

Sanitation facilities are lacking except at developed visitor sites in the area causing a build up around higher use dispersed sites by middle summer. Most users, when questioned, would like to see toilet facilities but do not consider them a high priority. Management concerns over disease and contamination of water sources is an area needing mitigation around dispersed sites that receive use every weekend throughout the summer.

### **Climbing Program**

The climb to the summit of Mount St. Helens is by permit only from May 15 to October 31 with a maximum of 100 permits issued per day. A reservation system allows issuance of up to 60 permits. Reservations are made by sending your request to Monument Headquarters and permits are booked on a first come, first served basis. For those people who are passing through the area or didn't get a reservation for their preferred date, 40 permits are issued each day at 6:00 p.m. at Jack's Restaurant near Cougar for the following days climbing permits. Selection is by lottery drawing. Selected individuals can name up to a party of four people on a wining drawing. When the first 40 permits are allocated, the drawing is over. Permits remaining after reservations and lottery are given out at Jack's Restaurant on a first come basis.

Primary access for climbing Mount St. Helens is from Climber's Bivouac at the terminus of road 8100-830. It is an easy day climb for the well conditioned hiker. Other routes are available to climb the mountain but 95% of hikers leave from Climber's Bivouac because it is the highest access point on the mountain.



## **Special Forest Products**

Demand continues to grow from recreational and commercial harvesters of floral products, berries, mushrooms and wood products. The lands within the Legislated Monument are closed to harvest of these products and compliance issues are getting harder to enforce with the greater influx of users

## **Budget**

Current budget trends show NFRM dollars declining on a rapid slide. Fiscal year 1995 brought a 30% reduction in funding, fiscal year 1996, 10% reduction, and the outlook is for additional reductions. Operation of visitor centers is the highest priority for the Monument and the forest. Trail (NFTR) funding was merged with NFRM (recreation \$) funding in 1995 effectively diluting the program. A part time volunteer coordinator manages the program, recruiting volunteers and coordinating trail maintenance projects. Recreation operation and maintenance crews have been reduced 50% and concentrate their efforts on developed sites. Volunteer efforts by organized clubs and individuals is the backbone of dispersed recreation O&M management at the ground level.

## **Tourism**

Ecotourism is a term new to the Forest Service in managing recreational opportunities. Surrounding communities and businesses are realizing the benefits of advertising Mount St. Helens and the recreational resources of the Gifford Pinchot National Forest. Recent community action plans for the city of Yacolt (Eisemen, 1995) and the Lewis River Valley (Hovee, 1995) targeted the Monument when Eisemen quoted the Monument as having the "recreational opportunities the public craves". With increased competition between commercial and recreation groups, greater emphasis will be placed on economics as tourism receives more attention as a tool for rural revitalization (Selin, 1994). Special use permits for outfitter guides providing mountain bike trips, hiking clubs sponsored by the Sierra Club, Portland Parks and other community organizations, and organized bus tours reached 30 permits for the area in 1995. Current growth is 15-20% per year in permit issuance.

## **Fee Legislation**

Fee legislation allowing the Monument to charge an entrance fee and keeping 80% of collected funds for operations and maintenance of facilities was passed by Congress in April, 1996. A business plan is being drafted to manage operations and collections.

Monument operations will become more business oriented with fee legislation. The Monument will become a competitor to other providers who currently charge entrance fees (i.e., MT. Rainier National Park, State Parks and commercial suppliers). Public recreation is a service product and marketing concepts can be effectively adapted to develop a marketing philosophy by the Forest Service (Syme, 1987).



The Monument is strategically positioned near a large metropolitan center with an established customer base, has excellent access from freeways and state highways, has a relatively new infrastructure and has a recognizable product. These factors make marketing Mount St. Helens a viable concept.

### **Concessionaire Management**

Several dispersed recreation programs merit evaluation for implementation of a concession management program. The climbing program and issuance of permits may be viable on a concession basis. Ape Cave managed with an entry fee would be a larger program than many commercial cave operations already operating nationwide. Ape Cave receives over 170,000 visits per year.

### **Law Enforcement and Medical Emergencies**

Primary security and enforcement is provided by federal agents of the U.S. Forest Service and Skamania County Sheriffs office as provided within cooperative agreements. Implementation of changes will require posting signs to assure adequate enforcement. Closures should take advantage of natural features, where possible, to facilitate enforcement. Emergency medical response will remain the primary responsibility of North Country Search and Rescue. This group, based in Yacolt, Washington, operates through grants and state support providing services to the Monument through an memorandum of understanding.

### **Interpretation and Environmental Educational Programs**

Provide interpretation of attractions and features of public interest, including Forest Service resource management activities. Develop handouts emphasizing dispersed program environmental message and showing areas we want to focus use. Incorporate information in Volcano Review handed distributed at visitor centers and local businesses. Develop presentations for organized user groups to develop an understanding of management needs and implementation schedules. Develop a signage plan that emphasizes what is allowed rather than restricted (i.e., "camping allowed here" rather than "no camping"). Incorporate "environmental messages" in Smokey Bear and other programs given to local schools.

### **Monitoring**

Monitoring will determine if users are complying with regulations, if compliance is producing desired results and whether unacceptable impacts are resulting from non-compliance. Management activities will be changed when monitoring indicates visitor behavior is creating unacceptable impacts on resources or visitors.

## **ITEMS FOR FUTURE STUDY AND DISCUSSION**

### **Recommendations:**

- 1) Develop an inventory of areas with concentrations of dispersed activity.
- 2) Develop an inventory of significant scenic attractions and recreational opportunities (i.e., waterfall, scenic vistas, old growth groves, meadows and dispersed sites).
- 3) Use inventories to plan additional dispersed recreational developments which will help meet public demand. Provide appropriate facilities (i.e., access, parking spots, and sanitation facilities) for the scenic attractions, recreational opportunities, or concentrations of dispersed use selected for management.
- 4) Areas where site hardening occurring, determine if acceptable to management objectives and mitigation measures required.
- 5) Determine areas requiring closure to protect visual qualities and vegetative measures needed to protect soil and water resource values.
- 6) Rotate site selection where long term hardening is detrimental to soil, water, and visual qualities.
- 7) Restrict dispersed camping sites to designated areas.
- 8) Plant screening vegetation adjacent to roadways where needed to shield dispersed camping sites from traveled routes.
- 9) Enforce 21 day stay limit for dispersed and developed sites.
- 10) Work with communities and dispersed campers to develop an educational and interpretive program increasing understanding and awareness to resource concerns, visual impacts, and managerial decisions. Conduct public meetings to solicit concerns and develop support for implementation of plan.
- 11) Implement an effective monitoring plan to monitor resource mitigation, measures, user acceptance and determining customer expectations.
- 12) Closure of areas should be implemented during off use seasons and timed to coincide with opening of new areas.
- 13) Limit vehicle travel to designated roads and parking areas adjacent to roads. Harden access spurs to dispersed camp sites.



- 14) Provide physical barriers to automobile travel in areas where wheel tracks are being developed in closed areas.
- 15) Identify capital investment program needs for facilities and sanitation. Develop a strategy to solicit partners and fund needs through Regional CIP program, IAC grants, youth programs, volunteer programs and partnerships.
- 16) Manage visual resources to prevent unacceptable alteration of natural landscapes and to create and maintain visual diversity in the landscape. Maintain visual quality by providing landscape settings which complement programmed management activities.
- 17) Maintain existing, heavily used, dispersed recreational areas (areas of concentrated public use) at a level that will not create environmental degradation.
- 18) Streams, rivers and riparian areas will have a 200 foot buffered strip free of camp sites either side of the watercourse.

### **SUMMARY AND CONCLUSIONS**

Population growth and development is extending outward from urban centers of Southwest Washington towards the Monument. Dispersed recreation demand will continue to increase proportionately with population growth (currently 5% per year).

Using an adaptation of the Limits of Acceptable Change planning process for dealing with increasing demands on dispersed areas will help us understand and develop a supportable management plan. Education and interpretation in the field, the written press and the Internet will carry our message. Managing resources to a high standard will protect sensitive resources and encourage dispersed recreation users to better care for the land.

Gathering of specialist and public input will occur over the next six months and inventory of actual ground conditions will prepare the framework for a dispersed recreation management plan for the South Side of Mount St. Helens NVM. This plan will provide a blueprint for management of this special area into the 21st century.



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## **RECREATION OPPORTUNITY SPECTRUM (ROS) DEFINITIONS**

### **1. Primitive (P):**

Interaction between users is very low and evidence of other users is minimal. Setting is a newly created volcanic landscape unmodified by humans. Access is primarily cross country with only a few primitive trails. Mode of travel is by foot only. Winter travel may be by cross country skis or snow shoes. No on site interpretive facilities. No designated viewpoints.

### **2. Semi-primitive Nonmotorized (SPNM):**

Interaction between users is low but there is often evidence of other users. Setting is predominately one of a newly created volcanic landscape with some unaffected areas in a natural state. Access is primarily by trail. Mode of travel is by foot or horseback. Winter travel is by cross country skis or snow shoes. No on site interpretive facilities.

Viewpoints may be designated but undeveloped.

### **3. Semi-primitive Motorized (SPM)**

Concentration of users is low but there is often evidence of other users. Setting may be predominately one of newly created volcanic landscape or unaffected high points outside. Access is primarily by primitive road or trail. Mode of travel in the winter may be by snowmobile. No on site interpretive facilities. Viewpoints may be designated but undeveloped.

### **4. Roaded Natural (RN)**

Interaction between users may be low to moderate but evidence of other users is prevalent. Setting contains newly created volcanic landscape defined by or framed by natural appearing unaffected vegetation. Access is by road varying from dirt to paved. Mode of travel is by auto, RV, or buses. Winter travel is by auto or tour buses. Wayside interpretive exhibits are made of natural appearing materials. Viewpoints are designated with minimal development.

### **5. Rural (R)**

Interaction between users is moderate to high. Setting is primarily one of pastoral scenes or small communities. Access is by road primarily double lane paved. Mode of travel is by auto, RV, or bus. Aerial trams are also possible. Interpretive facilities may be complex wayside exhibits of natural appearing materials. Viewpoints are designated with moderate development.

6. Urban (U)

Sights and sounds of humans on site are predominant; large numbers of users can be expected. Setting is an urbanized environment with vegetation sometimes exotic and manicured outside the monument. Access is usually by multi-lane paved highways. Mode of travel is by auto, RV, bus, surface trams or airplane. Interpretive facilities are sophisticated and located in an interpretive center. Viewpoints are highly developed.



**Leisure is part of life,  
A special flavor and a spice.  
To test our courage, heart and soul,  
For us to strive to meet a goal;  
To ski, to climb, to fly or run,  
To sail a boat in wind and sun,  
To feel the wind upon the face  
While deeply lost in thrill of race,  
To do the things we can do  
  
To start something and see it through,  
To say that we will try once more,  
And then one day, to finally score.  
The special lessons we'll keep gleaning  
Gives life and living special meaning,  
For well-spent leisure's more than play  
It readies us to meet the day.**

**- Robert Wilder from "The Gift of Leisure"**